FRESHWATER ANGLING IN BC — AN ECONOMIC PROFILE

Prepared for:

Economic Development Branch
BC Ministry of Sustainable Resource Management

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Prepared by:
GSGislason & Associates Ltd.
Vancouver, BC

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BUILDING BLOCKS FOR ECONOMIC DEVELOPMENT & ANALYSIS

PREFACE

PURPOSE

Building Blocks have been conceived and developed by the Economic Development Branch of the Ministry of Sustainable Resource Management, under the guidance of Nancy South, Manager Economic Analysis, as an analytical tool that supports British Columbia coastal and land and resource use planning and decision-making and economic development initiatives. The Blocks contain concise business and sector information for a broad range of resource-based business types in BC. At this point, there are more than 30 Blocks either complete or in draft form. Several more Blocks have been identified as high priority by planning tables and other client groups. Additional Building Blocks will be developed over time, and some Blocks may be updated. For the most current Building Blocks, please see the Ministry of Sustainable Resource Management website, at: http://srmwww.gov.bc.ca/rmd/ecdev/

ACKNOWLEDGEMENTS

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BENEFITS

Building Blocks are expected to provide the following general benefits:

- Increase efficiency and more informed decision-making by providing readily accessible, credible information to planning and economic development processes;
- Improve the consistency of economic information across planning areas;
- Support economic analysis and decision-making that occurs outside formal coastal and land use planning processes; and
- Provide linkages between economic analysis and other social and environmental analytical tools (through identifying resource requirements to support economic activities and general compatibilities with other sectors and values).

LIMITATIONS

Every effort has been made to ensure that the information contained in Building Blocks is accurate and consistent. Approved, credible data sources are the foundation for Building Blocks. All Blocks were reviewed by sponsoring agencies and other experts. However, users are cautioned that information is used at their own risk, and that the authors and sponsors are not liable for any damages. Any conclusions or interpretations by the authors are not intended to represent government policy. Also, note that Building Blocks do not provide site specific information nor do they consider requirements for sustainability (social, community, environmental).

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RECOMMENDED REFERENCE/CITATION

BC Ministry of Sustainable Resource Management, 2003, Building Blocks for Economic Development and Analysis, *[Title of Sector]*. http://srmwww.gov.bc.ca/rmd/ecdev/

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1.0 EXHIBIT 1: FRESHWATER ANGLING IN BC 2000/01 — A PRELIMINARY SECTOR OVERVIEW

1.1 Overview

- 335, 269 licenced freshwater anglers in BC in 2000/01 (303,729 active anglers).
- 4,402,000 angler-days of activity by licenced anglers in 2000/01 (plus 414,000 angler- days by 74,900 juveniles under 16 years of age); anglers under 16 do not need a licence.
- Angling occurs throughout the year but 2/3 of activity takes place in the four summer months June through September.
- The BC Wildlife Federation is a long -serving conservation organization in British Columbia.
- Other organizations that are dedicated to fish conservation and that promote stewardship of the resource include: BC Federation of Drift Fishers, BC Federation of Fly Fishers, Trout Unlimited Canada – British Columbia, British Columbia Fishing Resorts and Outfitters Association, and Guide Outfitters Association of British Columbia.

1.2 Resources

- BC offers a diversity of sport fishing experiences:
  - 216,846 lakes,
  - 789,363 km of streams,
  - 24 popular species of sport fish.
- Anglers need access to healthy fish populations in a natural setting.
- Angling takes place throughout the province which is divided into 9 resource management regions: Vancouver Island, Lower Mainland, Thompson-Nicola, Kootenay, Cariboo-Chilcotin, Skeena, Omineca, Peace and Okanagan (no one region has more than 20% of total provincial angling activity).
- The Skeena Watershed is a particularly valuable angling region. The Skeena Watershed represents one of the last major Pacific drainages where record size chinook and wild summer run steelhead can be found. The Watershed is unique in the diversity of species available, the large size of fish, the fly fishing opportunities, and its pristine wilderness setting.
- Trout is the main species of interest and catch.
- Fish harvested in 2000/01 – 1.35 million rainbow trout, 0.15 million cutthroat trout, 0.17 million other trout, 0.01 million steelhead, 0.05 million Dolly Varden, 0.45 million kokanee, 0.19 million salmon and 0.17 million other fish.
- Most steelhead fishing is "catch and release" fishing (and "catch and release" is common for many other species as well).

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1.3 Products

- Angling is a form of outdoor recreational activity.
- Angling occurs from shore, beach, pier or boat, and anglers use lures, bait, flies, and set lines as gear.
- Three main components of the angling activity are:
  - catching fish – regardless of whether the fish is harvested or kept,
  - harvesting fish – for those anglers who are allowed to choose to do so,
  - aesthetic experience – derived from the natural environment.
- In view of these distinct components, angling activity is measured not in units of fish caught or harvested, but in "angler days" defined as one angler fishing for part of a single day.
- Two broad types of angling experiences exist:
  - independent anglers – pursue their own fishery experience and assume responsibility for their fishing gear, boat and fuel (if required), accommodation, meals and transportation,
  - guided/lodge anglers – hire a third party to package one or more of accommodation, meals, guiding services, boat, equipment and transportation to facilitate the angling experience.
- In 2001/02 there were 63,600 guided angler days or 1.4% of the total 4.4 million angler-days.

1.4 Market

- General angler profile (DFO, "2000 Freshwater Angling Survey"):
  - licenced angler residence: 78% BC, 9% Rest of Canada, 13% outside Canada,
  - average age is mid 40s,
  - 79% male,
  - average of 19 years fishing experience in BC,
  - on average, anglers from outside BC have higher household income than anglers from BC.

1.5 Regulatory Regime

- Management responsibility for freshwater or non-tidal angling in BC has been delegated to the provincial government by the federal government (the exception is non-tidal angling for anadromous salmon, excluding steelhead, that is managed by DFO).
- Anglers fishing in freshwater are licenced under the authority of the BC *Wildlife Act* (all anglers 16 years of age or older and fishing in freshwater require a licence).
- The Ministry of Water, Land and Air Protection (MWLAP) is responsible for all licences and permits issued under the BC *Wildlife Act* and its regulations (the Ministry provides yearly a summary titled "Freshwater Angling Regulations Synopsis").

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- Anglers must:
  - have a valid fishing licence,
  - abide by restrictions on allowable gear,
  - obey minimum or maximum size limits on fish that they catch and keep,
  - observe fishing seasons,
  - adhere to water-specific closures,
  - observe restrictions on bag limits of fish that they can catch.
- Conservation Surcharge stamps are supplementary licences required to fish for steelhead, or retaining salmon or specific stocks of trout or char.
- A Classified Waters licence is required to fish on specific waters.

1.6 Classified Waters

- The Province introduced in 1990/91 a new Classified Waters management system. The purpose was threefold:
  - to provide a diversity of angling opportunities,
  - to maintain quality angling,
  - to improve regulation of the angling guide industry.
- Under the system, 42 highly productive trout and steelhead streams have been designated as classified waters (7 Class 1, 35 Class 2).
- These classified waters require an additional licence and management capacity to limit angler activity and angling guides.
- Class 1 waters are remote, pristine, wilderness waterbodies with significant fisheries values which are largely accessible only by boat or aircraft.
- Class 2 waters are more accessible but still offer quality fishing experiences.

1.7 Conservation

- The Habitat Conservation Trust Fund is directly supported by surcharges on hunting and fishing licences. Since 1981, the BC Habitat Conservation Trust Fund has invested $48 million in wildlife and fisheries conservation programs in BC.
- Affiliated with the BC Wildlife Federation, the BC Conservation Foundation administers, implements and delivers a wide variety of conservation related projects.

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1.8 Capacity for Growth

- There has been a significant decline in activity and expenditures in recent years:

	Angler-Days	Total Expenditures
1985	5.7 million	$303 million
1990	5.3 million	$468 million
1995	6.3 million	$494 million
2000	4.4 million	$402 million

- Potential reasons behind the decline include:
  - competition from other activities such as golfing, skiing/snowboarding and nature observation,
  - increased costs,
  - decline in fish populations in certain areas,
  - increasing complexity and restrictiveness of provincial angling regulations,
  - demographics including increasing population age and urbanization.
- Potential growth areas include: fly fishing experiences, experiences catering to women and family groups, high alpine fishing, experiences combining fishing and non-fishing activities (e.g. nature observation, adventure travel, golfing).

1.9 Government Revenues

- Basic licence fees:
  - annual ($30 BC resident, $40 other Canadian, $55 non-Canadian),
  - one day ($8 BC resident, $15 other),
  - eight day ($17 BC resident, $25 other Canadian, $30 non-Canadian),
  - annual licence fee for disabled ($1 BC resident, others not eligible),
  - annual licence for age 65 plus ($5 BC resident, others not eligible).
- Conservation Surcharges:
  - steelhead ($15 BC resident, $40 other),
  - salmon ($10 BC resident, $20 other),
  - Kootenay Lake rainbow trout ($10 BC resident, $20 other),
  - Shuswap Lake rainbow trout ($5 BC resident, $10 other),
  - Shuswap Lake char ($5 BC resident, $10 other).
- Classified Waters licence fees:
  - annual ($10 resident, others not eligible),
  - Class 1 Waters ($20/day for non-residents of BC),
  - Class 2 Waters ($10/day for non-residents of BC).

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2.0 EXHIBIT 2: FRESHWATER ANGLING IN BC 2000 – A PRELIMINARY ECONOMIC PROFILE

	Total Activity 2000	2000 Activity Ratios Per	
		Active Angler	Angler-Day
Active Anglers			
BC Residents	235,700	0.78	0.05
Residence of Rest of Canada	28,900	0.09	0.01
Non-Canadians	39,100	0.13	0.01
Total	303,700	100	0.07
Conservation Surcharge Stamps	98,099	0.32	0.02
Classified Waters Licences	38,628	0.13	0.01
Angler-Days	4,402,000	14.5	1.00
Angler Expenditures			
Major Expenses - Boating Equipment	$39.9 million	$131	$9
- Fishing Equipment	17.5 million	58	4
- Other	131.7 million	434	30
Direct Expenditures - Packages	21.0 million	69	5
- Guide Services	4.8 million	16	1
- Accommodation & food	83.6 million	275	19
- Travel	57.9 million	191	13
- Owned Boat Costs	16.2 million	53	4
- Suppliers & Services	18.1 million	60	4
- Licence/Access fees[1]	11.6 million	38	2
	$402.3 million	$1325	$91
Provincial Government Revenues			
Basic Licences	$9.14 million	$30	$2
Conservation Surcharges	1.27 million	4	0
Classified Waters	0.44 million	1	0
	$10.85 million	$35	$2

Source: Estimates by GSGislason & Associates Ltd. based on DFO 2000 Freshwater Angling Survey and BC Ministry of Water, Land and Air Protection licence data.

[1] Includes GST (but provincial gov't revenues below exclude GST).

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3.0 EXHIBIT 3: FRESHWATER ANGLING LICENCE SALES

	Fiscal Year		
	1995/96	1998/99	2001/02
BC Resident			
Annual	279,433	241,860	238,773
1 Day	25,574	24,477	23,782
8 Day	9,974	15,086	15,836
Disabled	2,719	4,748	6,850
Classified Waters	1,527	8,456	10,883
Other Canadian			
Annual	16,616	10,485	11,851
1 Day	6,941	5,543	6,484
8 Day	13,040	14,795	17,364
Classified Waters Class 1	2,143	697	470
Classified Waters Class 2	In above	2,759	3,816
Non-Canadian			
Annual	11,038	8,762	9,557
1 Day	9,095	9,388	10,636
8 Day	23,000	23,249	23,694
Classified Waters Class 1	5,068	4,062	5,243
Classified Waters Class 2	In above	13,215	18,216
Conservation Stamps			
Non-Tidal Salmon	54,167	46,352	65,514
Steelhead	24,021	21,819	23,451
Kootenay Lake	2,455	4,466	3,122
Shuswap Rainbow Trout	3,969	3,571	4,321
Shuswap Char	1,231	1,336	1,691

Source: BC Ministry of Water, Land and Air Protection administrative records.

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4.0 EXHIBIT 4: REGIONAL PROFILE OF BC FRESHWATER ANGLING ACTIVITY 2000

	Van Island	Lower Main-land	Thompson - Nicola	Koot-enay	Cariboo - Chilcotin	Skeena	Omineca - Peace	Okan-agan	Total Province
Activity Angler Days '000*	521.0	800.9	756.0	648.0	500.3	348.0	406.2	421.6	4,402.0
Caught Fish '000									
Rainbow Trout	314.9	357.7	1,425.1	656.2	876.3	321.0	539.0	618.8	5,109.0
Cutthroat Trout	404.2	137.6	6.3	471.1	36.3	56.9	5.3	22.4	1,140.1
Other Trout	34.8	18.5	107.0	82.6	71.6	34.6	53.2	61.3	463.6
Steelhead	37.8	29.9	5.7	0	12.2	66.1	0.3	0	152.0
Dolly Varden	23.0	43.5	12.6	95.8	21.3	27.2	34.1	3.6	261.1
Kokanee	16.1	10.2	64.2	301.0	73.4	8.9	125.3	69.9	669.0
Salmon	55.7	494.0	10.6	1.3	81.9	105.1	2.2	5.2	756.0
Walleye	0.6	0	0.1	9.8	0	0.1	47.2	1.8	59.6
Grayling	0	7.3	2.3	0	0.3	34.1	30.8	0.2	75.0
Whitefish	0	28.4	24.6	33.2	9.3	2.2	58.4	13.4	169.5
Perch	22.1	2.6	30.7	71.8	0	0.6	4.9	39.6	172.3
Bass	68.8	0.3	0.6	44.1	0.7	0.6	0	25.9	141.0
Pike	0.2	0.2	0.1	0.6	0	1.4	34.9	0.9	38.3
Other	8.8	62.2	20.8	28.4	14.4	4.9	59.9	22.9	222.3
Kept Fish '000									
Rainbow Trout	71.4	50.1	374.9	124.7	253.3	114.6	191.5	172.5	1,353.0
Cutthroat Trout	75.3	24.9	1.7	26.4	3.6	9.7	1.4	4.5	147.5
Other Trout	9.9	4.4	38.1	23.3	31.6	15.8	18.0	29.3	170.4
Steelhead	5.9	6.0	0	0	0	0.4	0	0	12.3
Dolly Varden	4.8	4.5	2.6	24.3	4.4	4.1	2.4	0.5	47.6
Kokanee	1.6	5.9	44.3	189.2	52.3	4.2	109.9	37.6	445.0
Salmon	7.4	134.5	5.7	0.9	9.7	26.4	0.1	3.2	187.9
Walleye	0	0	0.1	4.4	0	0.1	8.1	0.4	13.1
Grayling	0	0.1	1.7	0	0.1	5.2	3.5	0	10.6
Whitefish	0	14.4	2.8	16.9	0	0.1	3.7	3.5	41.4
Perch	0.1	0	7.0	15.1	0	0	1.3	15.7	39.2
Bass	5.5	0	0.2	11.2	0.1	0.5	0	2.5	20.0
Pike	0.1	0	0.1	0	0	0.6	5.2	0.8	6.8
Other	0.7	14.0	0.9	3.6	4.2	2.6	7.9	0.1	34.0

Source: DFO, "2000 BC Freshwater Sport Fishing Survey."

* Excludes angling by juveniles under 16 years of age

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5.0 EXHIBIT 5: PROFILE OF BC STEELHEAD ANGLING

	Vancouver Island	Lower Mainland	Thompson-Nicola	Cariboo-Chilcotin	Skeena	Unknown	Total
2001/02 Activity							
No. Anglers	4,471	7,182	1,309	1,057	8,862	255	23,141
Angler-Days	24,000	64,200	7,200	6,600	51,600	1,300	155,000
Steelhead Kept	1,300	3,420	30	40	1,030	40	5,860
Steelhead Released	20,960	22,630	5,320	9,530	46,890	630	105,960
Steelhead Catch	22,260	26,050	5,350	9,570	47,920	670	111,820

	No. Anglers	Angler-Days	Steelhead		
			Kept	Released	Total
1980/81	21,658	131,100	10,920	39,960	50,880
1981/82	21,576	126,000	9,940	47,700	57,640
1982/83	24,817	148,600	13,440	60,620	74,060
1983/84	26,380	172,300	14,890	79,220	94,110
1984/85	30,506	208,000	18,500	127,290	145,790
1985/86	32,044	215,800	19,000	123,560	142,560
1986/87	42,856	279,900	24,530	161,580	186,110
1987/88	39,446	258,800	16,570	136,010	152,580
1988/89	43,622	289,300	17,410	101,470	178,880
1989/90	38,874	239,500	12,180	113,050	125,230
1990/91	33,953	192,100	9,400	88,000	97,400
1991/92	31,743	193,600	10,120	88,540	98,660
1992/93	31,676	199,300	10,920	107,490	118,410
1993/94	33,675	189,800	7,150	73,460	80,610
1994/95	31,711	187,600	7,830	94,980	102,810
1995/96	31,404	186,900	6,670	90,450	97,120
1996/97	24,633	149,700	6,280	85,080	91,360
1997/98	23,645	151,800	5,870	80,660	86,530
1998/99	23,242	145,800	6,860	97,460	104,320
1999/00	23,228	145,300	5,060	90,380	95,440
2000/01	24,160	159,600	6,590	110,090	116,680
2001/02	23,134	155,000	5,860	105,950	111,810

Source: Scholten, G.H. "Steelhead Harvest Analysis 2001-2002 Season Results," BC Ministry of Water, Land & Air Protection, January 2003.

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